Cpto

Pre. Amdt.

CEThomas (12.03.04)

Claims 1-6 (Cancelled)

-- 7. A method of transmitting voice information in a radio communication system comprised of a base station and mobile stations connected by broadband radio frequency channels that are subdivided into time slots, the method comprising:

transmitting data sequences from the mobile stations to the base station, wherein one of the data sequences is included in a first group of time slots allocated to a first mobile station and one of

the data sequences is included in a second group of time slots allocated to different mobile stations other than the first mobile station; and

transmitting a radio block from the base station to the mobile stations, wherein the radio block includes data sequences with a midamble embedded between the data sequences.

8. The method of claim 7, wherein one part of the time slots of a frame is used in a TDD subscriber-separation method on an uplink from the mobile stations to the base station and another part of the time slots is used for a downlink from the base station to the mobile stations.

9. The method of claim 7, further comprising allocating different spread codes to different mobile stations.

10. The method of claim 7, wherein, on an uplink from the mobile stations to the base station, either one long radio block is transmitted by one mobile station for each time slot or two short temporally orthogonal radio blocks are transmitted by two different mobile stations, the one long radio block comprising two data sequences and each short radio block comprising only one data sequence.

11. The method of claim 7, wherein a resource unit comprises bandwidth, a spread code, and a time slot, and wherein between one-half and one resource unit is allocated to a mobile station using hybrid-type allocation for use in transmission between the base station and the mobile stations.

12. The method of claim 11, wherein one time slot with both data sequences is allocated to one mobile station in every third frame of voice information, and one time slot with only one data sequence is allocated in two out of three frames of voice information. - -